

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets

6AEP.1



(11)

EP 1 079 530 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
19.06.2002 Bulletin 2002/25

(51) Int Cl.7: H04M 1/73, H04B 1/16,
H04B 1/40

(43) Date of publication A2:
28.02.2001 Bulletin 2001/09

(21) Application number: 00120210.0

(22) Date of filing: 17.07.1995

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB IE IT LI NL PT SE

(30) Priority: 21.07.1994 US 278471

(62) Document number(s) of the earlier application(s) in
accordance with Art. 76 EPC:
95927208.9 / 0 775 388

(71) Applicant: INTERDIGITAL TECHNOLOGY
CORPORATION
Wilmington, DE 19801 (US)

(72) Inventors:

- Estulin, Walter
Philadelphia, PA 19116 (US)
- Huah, Jim J.
Cherry Hill, NJ 08034 (US)

- Kaewell, John
Bensalem, PA 19020 (US)
- Kinney, Kevin
Coopersburg, PA 18036 (US)
- Lemmo, Mark A.
Holland, PA 18966 (US)
- Regensburg, Michael W.
Marlton, NJ 08053 (US)
- Vanderslice, William T. Jr.
Norristown, PA 19401 (US)
- Vessel, David
Villanova, PA 19086 (US)

(74) Representative: Frohwitter, Bernhard, Dipl.-Ing.
Patent- und Rechtsanwälte,
Possartstrasse 20
81679 München (DE)

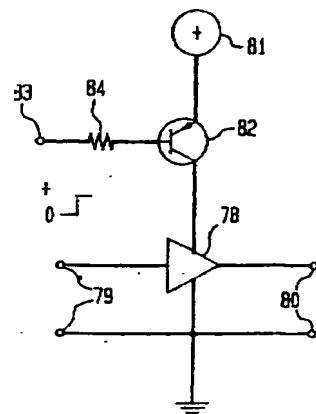
(54) Power consumption control method and apparatus for a communication system subscriber unit

(57) A subscriber unit of a time division multiple access (TDMA) radiotelephone system is, from a power consumption standpoint, reconfigured in each time slot of a TDMA frame to a power consumption tessellation in which subscriber unit circuit components not needed for communication signal processing in that time slot are powered down, and other components are powered up.

Some circuit components are powered down by switching their power supply circuits. In order to minimize the extent of circuitry that must be provided to distribute power consumption control signals, other techniques (which utilize circuitry provided for other purposes), such as clock frequency control or power down commands, also are utilized to modify controlled circuit component power consumption without actually controlling power supply circuits. Loop connection length between the subscriber unit and the subscriber's telephone set, or other terminal equipment, is limited to a length which is much less than the length of a radio link on which the subscriber unit operates. Programmable ring frequency logic controls the frequency of a ringing signal generator, and a high frequency ring control sig-

nal is switched on and off in the cadence of ringing operation. Also an expansion header is provided to enable serving plural subscriber loop circuits with the same radio equipment for reducing per line power consumption.

FIG. 3



EP 1 079 530 A3

THIS PAGE BLANK (USPTO)



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)	
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)	
X	WO 94 10812 A (SIEMENS AG ;PILLEKAMP KLAUS DIETER (DE)) 11 May 1994 (1994-05-11) * page 9, line 11 – page 11, line 2; claims 1,8; figures 1,4 *	1,2,4,5, 7,8 3,6,9	H04M1/73 H04B1/16 H04B1/40	
Y	EP 0 494 459 A (THOMSON CONSUMER ELECTRONICS) 15 July 1992 (1992-07-15) * abstract *	3,6,9		
A	EP 0 452 877 A (NIPPON ELECTRIC CO ;NIPPON TELEGRAPH & TELEPHONE (JP)) 23 October 1991 (1991-10-23) * column 8, line 6 – column 9, line 43; figures 7A,7B,7C *	1-9		
A	US 4 731 814 A (BECKER WILLIAM R ET AL) 15 March 1988 (1988-03-15) * abstract; figures 1,3 *	1,2,4,5, 7,8		
A	WO 93 06682 A (MOTOROLA INC) 1 April 1993 (1993-04-01) * abstract * * page 6, line 1 – line 5 *	1,2,4,5, 7,8	TECHNICAL FIELDS SEARCHED (Int.Cl.7) H04B H04M H04Q	
The present search report has been drawn up for all claims				
Place of search	Date of completion of the search	Examiner		
MUNICH	24 April 2002	Kolbe, W		
CATEGORY OF CITED DOCUMENTS				
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : Intermediate document				
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document				

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 00 12 0210

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

24-04-2002

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 9410812	A	11-05-1994	DE AU AU CA CN WO DE DK EP ES FI HK JP JP US	9214886 U1 673208 B2 5368894 A 2148282 A1 1090688 A ,B 9410812 A1 59307353 D1 667089 T3 0667089 A1 2107686 T3 952056 A 1000953 A1 2967528 B2 7508867 T 5594737 A	03-03-1994 31-10-1996 24-05-1994 11-05-1994 10-08-1994 11-05-1994 16-10-1997 14-04-1998 16-08-1995 01-12-1997 28-04-1995 08-05-1998 25-10-1999 28-09-1995 14-01-1997
EP 0494459	A	15-07-1992	CN EP JP	1063389 A 0494459 A2 5055995 A	05-08-1992 15-07-1992 05-03-1993
EP 0452877	A	23-10-1991	JP JP JP AU AU CA DE DE EP KR US	2571297 B2 4000823 A 2919011 B2 4082428 A 636736 B2 7510691 A 2040572 C 69116920 D1 69116920 T2 0452877 A2 9410209 B1 5239572 A	16-01-1997 06-01-1992 12-07-1999 16-03-1992 06-05-1993 24-10-1991 07-02-1995 21-03-1996 04-07-1996 23-10-1991 22-10-1994 24-08-1993
US 4731814	A	15-03-1988	CA GB HK IT JP SG	1256225 A1 2187065 A ,B 90590 A 1202566 B 62248323 A 63990 G	20-06-1989 26-08-1987 09-11-1990 09-02-1989 29-10-1987 07-09-1990
WO 9306682	A	01-04-1993	AU CN FR IT MX WO	2417892 A 1071292 A 2683408 A1 1258482 B 9205231 A1 9306682 A1	27-04-1993 21-04-1993 07-05-1993 26-02-1996 01-03-1993 01-04-1993